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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/074,827	02/12/2002	Edward C. McKinney JR.	SHPR-01041USQ SRM/SDS	8062
23910	7590	01/30/2006	EXAMINER	
FLIESLER MEYER, LLP FOUR EMBARCADERO CENTER SUITE 400 SAN FRANCISCO, CA 94111			TRAN, THAO T	
			ART UNIT	PAPER NUMBER
			1711	

DATE MAILED: 01/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/074,827	Applicant(s) MCKINNEY ET AL.	
	Examiner Thao T. Tran	Art Unit 1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 November 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,4-22,30-35 and 37-49 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-22,30-35 and 37-49 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/09/2005 has been entered.
2. Claims 1, 4-22, 30-35, 37-49 are currently pending in this application. Claims 1, 8, 14, 15, 21, 37, 44, 46, and 48 have been amended in this Reply.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 4-22, 30-35, 37-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morita et al. (US Pat. 5,290,343).

Morita discloses a electrostatic precipitator for cleaning air, the precipitator comprising an air inlet, an air outlet, discharge electrodes 106, 10, and collector electrodes 105, 15 (see Figs. 1, 4, 6-7, and 12). The dust collector 15 comprises a multiple electrode sheets 14 (see Fig. 12). Morita further discloses the discharge electrodes and the dust collector 15 are detachably

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mounted on the frame 20. The discharge electrodes are connected to handles 34 whereas the dust collector electrodes are connected to handle 38, so that the electrodes can be easily removed from the frame for cleaning (see col. 7, ln. 52-61; col. 8, ln. 4-29). In the prior art section, Morita further discloses the collector electrodes connected to panel 102, which is detachably mounted on a front opening of the body casing and can be removed for cleaning (see col. 1, ln. 20-22; col. 2, ln. 1-3). Thus, Morita describes the handle connected to the collector electrodes could be positioned on the side or the bottom of the air cleaning device, whereas the handle connected to the discharge electrodes is positioned on the top surface of the device.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have had the handle connected to the collector electrodes on the top surface, bottom, or the side of the device and would have worked equally well in handling the removal of the electrodes from the device for cleaning.

Morita does not teach the collector electrodes to be hollow and U-shaped. However, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, that the configuration of the electrodes would have been designed in a way that would have brought more benefits depending upon user's preference and intended use. A hollow electrode would have been lighter and easier to handle, and a U shape would have provided more surface area to collect more dust particles, and thus providing better air quality.

5. Claims 1, 4-22, 30-35, 37-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahlborn et al. (US Pat. 6,635,105), cited in the IDS of 4/11/2005.

Ahlborn discloses an electrostatic precipitator, comprising an emitter electrode 2 having emitting needle 2A, a collector electrode 1A, and a cleaning mechanism 3 to clean the emitting

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needle 2A (see Fig. 1; col. 2, ln. 14-55). The collector electrode 1A has an elongated cylindrical shape.

Ahlborn differs from the presently claimed invention in that the reference does not teach a plurality of electrodes arranged in array. However, it would have been obvious to one of ordinary skill in the art that duplication of parts would have no significant patentable weight. A plurality of the emitting electrodes would have enhanced the ionization of particulate matter and a plurality of the collecting electrodes would have enhanced the collection of particulate matter, providing more efficient cleaning of the air.

6. Claims 1, 4-22, 30-35, 37-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Utsumi et al. (US Pat. 4,318,718).

Utsumi teaches an electric dust collector (apparatus for conditioning air), comprising collector electrodes 3 and discharge wires 4 (emitter electrodes) that are vertically disposed (see abstract; Figs. 1-5; col. 2, ln. 21-32).

Each discharge wire has a slider 9 (cleaning mechanism) fitted over so that the slider can move up and down to frictionally remove debris from the wire electrode. Utsumi further teaches the slider comprises a collar 8 and a brush 19 that are non-conductive (insulating material) (see Fig. 6; col. 3, ln. 42-51). The collector electrodes and the wire electrodes are substantially parallel with each other (see Fig. 6).

Although Utsumi does not teach the collector electrodes to be hollow, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, that the configuration of the electrodes would have insignificant patentable weight. This is because

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whether the electrodes are hollow or not, they only attract dust on the outer surface. Moreover, Applicants have not disclosed the advantages of hollow collector electrodes over the solid ones.

***Response to Arguments***

7. Applicant's arguments with respect to the rejection of the claims as obvious over Lee have been considered but are moot in view of the new ground(s) of rejection.

***Contact Information***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thao T. Tran whose telephone number is 571-272-1080. The examiner can normally be reached on Monday-Friday, from 9:00 a.m. - 5:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Thao Tran*

tt

January 23, 2006

**THAO T. TRAN  
PATENT EXAMINER**